Amendments to the Drawings

The drawings have been amended as follows:

In Fig. 1, the reference number 146 is labeled with "Failsafe Network Device"; reference number 112 is labeled with "Storage Bus"; reference numbers 124-0 and 124-1 are labeled with "Trunk"; reference number 126-N is labeled with "client"; and reference number 132 is labeled with "Communication Network". Support is found in the original specification at page 9, lines 20-26; page 5, lines 17-20; page 6, lines 20-26; page 5, lines 4-8; page 5, lines 9-15 among other teachings throughout the specification.

In Fig. 2, the reference number 140 is replaced with the reference number 142. Support is found in the original specification at page 8, lines 11-15 among other teachings throughout the specification.

In Fig. 6, the decision symbol containing the text "MORE DATA?" is labeled with reference number "608". Support is found in the original specification at page 18, lines 8-11 among other teachings throughout the specification.

Attachment: Replacement Sheets (6)
                Annotated Sheets, Fig. 1, Fig. 2 and Fig.6

REMARKS

Claims 2, 4-7, 9-11, 13, 15-22, 25 and 27-36 are pending in the application. Claims 1-36 were rejected. Claims 1, 3, 8, 12, 14, 23-24 and 26 have been cancelled without prejudice. Claims 2, 4-6, 9-11, 13, 15-17, 19, 22, 25, 27-29, 31 and 34-35 have been amended by the present amendment. No new matter have been introduced by way of these amendments.

Allowed Claims

The Examiner has indicated that claims 2, 4, 7, 9, 10, 13, 15-22, 25, 27-36 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112, 2nd paragraph, set forth in the Office Action at hand and to include all of the limitations of the base claim and any intervening claims.

With entry of the foregoing amendment, claim 2 is now rewritten in independent form, and claims 5-7 depend from claim 2. It is believed that these claims are now in condition for allowance.

Claim 4 is now rewritten in independent form. It is believed that claim 4 is now in condition for allowance.

Claim 9 is now rewritten in independent form, and claims 10-11 depend from claim 9. It is believed that these claims are now in condition for allowance.

Claim 13 is now rewritten in independent form. It is believed that claim 13 is now in condition for allowance.

Claim 15 is now rewritten in independent form, and claims 16-22 and 35 depend from claim 15. It is believed that these claims are now in condition for allowance.

Claim 25 is now rewritten in independent form. It is believed that claim 25 is now in condition for allowance.

Claim 27 is now rewritten in independent form, and claims 28-34 and 36 depend from claim 27. It is believed that these claims are now in condition for allowance.

On page 2 of the Office Action, the Examiner stated with regard to claim 4, that "it is confusing whether it is the same virtual device structure of 'a virtual device structure allocated

for the virtual network device' of claim 3, lines 19-20". Applicants have amended claim 4. The claimed step of "examining the contents of the owner field" in the device structure, is examining the same device structure that is allocated to the communications port that receives the data packet. Applicants believe that claim 4 is now clear.

Drawings Objections

On page 2 of the Office Action, the drawings were objected to because pertinent structural elements of the invention should be labeled. Applicants have labeled the structural elements as shown in Fig.1. Applicants have also made corrections for minor typographical error in Fig. 2 and Fig. 6. Applicants believe these labels overcome the above objections and therefore request that the above objections to the drawings be withdrawn. No new matter is being introduced by way of the labeling.

On page 2 of the Office Action, the drawings were objected to under 37 C.F.R. 1.83(a). The Examiner has specifically stated the drawings must show every feature of the invention specified in the claims.

Claims 1, 3 and 8 have been cancelled. Claims 1, 3 and 8 are incorporated into amended claims 2, 4 and 9, respectively. The step of "assigning ownership of the plurality of communications ports to a first virtual device" as recited in the amended claim 2 is shown at least in Fig. 3 reference # 302. The step of "setting a network address associated with the first virtual device" as recited in the amended claim is shown at least in Fig. 3, reference # 306. The step of "setting network addresses for the remaining plurality of communications ports" as recited in amended claim 2 is shown at least in Fig. 3, reference # 308. Amended claim 2 no longer recite the step of "setting a virtual network address assigned to the virtual network device to the trunk network address." As a result of the amendment, the network address is being established for the first virtual device in the line "setting a network address associated with the first virtual device to a first network address, the first network address assigned to a first communications port." Support is found in the original specification, for example, on page 13, lines 23-28; and in Fig. 3, reference # 306. With respect to amended claims 4 and 9, at least for the same reasons as stated for amended claim 2, Fig. 1 and Fig. 3 show the features of amended claims 4 and 9.

With respect to claims 2 and 3, Applicants have cancelled claim 3. Claim 3 is incorporated into amended claim 4. Amended claims 2 and 4, in relevant part, recite the step of "allocating a plurality of device structures" is shown at least in Fig. 2. Fig. 2 is a block diagram of device structures allocated in the NICdevice driver 140 (as an example shown in Fig. 1) in memory 108 (as an example shown in Fig. 1) for each network device port 136-0 to 136-9 as an example shown in Fig. 1. A NICdevice structure 200 in Fig. 2 is allocated for each network device port 136-0, . . . ,136-9 in the network interface 120 in the data mover 100.

With respect to claim 11, Fig.1 at least shows the first plurality of ports may be P0-P5 and the second plurality of port may be P6-P9. A second plurality of communications ports may be coupled to a second switch. The configuration routine assigns ownership of the second plurality of communications ports coupled to a second switch to a second virtual device (as an example shown in Fig. 5 labeled "VD2") and ownership of the virtual device and the second virtual device to a third virtual device (as an example shown in Fig. 5 labeled "VD3"). The configuration routine also sets a failsafe network device address associated with a failsafe network device (as an example shown in Fig. 1, reference # 146) to the network address associated with the first virtual device (as an example shown in Fig. 5, labeled "VD1") and sets network addresses assigned to the second plurality of communications ports (as an example shown in Fig. 1, reference # 136-6 to 136-9 are P6-P9) to the failsafe network device address. The step of "setting the network address assigned to the first virtual device" is shown, as an example, in Fig. 5, labeled "VD1" and "a network address assigned to the second virtual device" is shown, as an example, in Fig. 5, labeled "VD2".

With respect to claims 12 and 14, Applicants have cancelled claims 12 and 14. Claims 12 and 14 have been incorporated into amended claims 13 and 15, respectively. Therefore, in amended claims 13 and 15, a trunk configuration routine is shown in Fig. 1, reference # 144. The trunk configuration routine creates a virtual device (as an example shown in Fig. 4, labeled "VD") for the plurality of communications ports (as an example shown in Fig. 1, reference # 136-0 to 136- 9, labeled as P0 to P9), sets a network address associated with the virtual device (as an example shown in Fig. 4, labeled "VD") to a first network address assigned to a first communications port (as an example shown in Fig. 1, reference # 136-0, labeled P0) and sets network addresses for the remaining communications ports (as an example shown in Fig.1,

reference # 136-1 to 136-5, labeled P1 to P5) in the plurality of communications ports to the network address associated with the virtual device (as an example shown in Fig. 4, labeled "VD"). With respect to claims 24 and 26, Applicants have cancelled claims 24 and 26. Claims 24 and 26 have been incorporated into amended claims 25 and 27, respectively. Consequently, at least for the same reasons as stated for amended claims 13 and 15, Fig. 1 and Fig. 4 show the features of amended claims 25 and 27.

With respect to claim 16, a virtual device driver (as an example shown in Fig. 1, reference # 150) which selects one of the plurality of communications ports (as an example shown in Fig. 1, reference # 136-0 to 136-9, labeled P0 to P9) through which to transmit a data packet on the trunk (as an example shown in 124-0 and 124-1).

The Applicants believe these amendments and explanations overcome the above drawings objections and therefore request that the above objections be withdrawn. No new matter is added.

Rejections of Claims Under 35 U.S.C. 112, Second Paragraph

On page 3 of the Office Action, claims 1-36 were rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

Claim 5 has been rewritten to recite the steps of "receiving a data packet destined for the data network at the first virtual device; and transmitting the data packet through one of the plurality of communications ports in the trunk." Applicants believe amended claim 5 is now clear. Thus amended claim 5 complies with the requirements of 35 U.S.C. 112, second paragraph. The rejection is respectfully traversed and reconsideration is requested.

Claim 8 has been cancelled. Claim 8 is incorporated into amended claim 9. Amended claim 9 recites, in relevant part, the steps of "coupling the plurality of communications port to a switch". Thus the suggestion of the Examiner in this regard had been appreciated and adopted by the Applicants. Amended claim 9 was also amended to recite, in relevant part, the steps of "setting a network address associated with the first virtual device to a first network address, the first network address assigned to a first communications port." Thus amended claim 8 complies with the requirements of 35 U.S.C. 112, second paragraph. The rejection is respectfully

traversed and reconsideration is requested.

Claim 11 has been amended to recite, in relevant part, the steps of "assigning ownership of the first virtual device and the second virtual device to a third virtual device", "setting the network address assigned to the first virtual device and a network address assigned to the second virtual devices to the failsafe network device address", and "upon receiving a data packet from the data network for the failsafe network device address by a communications port in the plurality of communications ports in the trunk, forwarding the data packet to the failsafe network device." Claim 11 was amended to clarify the confusion as to which virtual device. Further, claim 11 was amended to clarify the confusion as to which virtual network address. Additionally, claim 11 was amended to clarify that the communications ports are the communications ports in the trunk. Thus amended claim 11 complies with the requirements of 35 U.S.C. 112, second paragraph. The rejection is respectfully traversed and reconsideration is requested.

Claim 12 has been cancelled. Claim 12 is incorporated into amended claim 13. Amended claim 13 recites, in relevant part, a network file server comprising "a trunk configuration routine which creates a virtual device for the plurality of communications ports, sets a network address associated with the virtual device to a first network address assigned to a first communications port and sets network addresses for the remaining communications ports in the plurality of communications ports to the network address associated with the virtual device." Amended claim 13 is now clear. With respect to claims 14, 24 and 26, these claims were cancelled. Claims 14, 24 and 26 are incorporated into amended claims 15, 25 and 27, respectively. Amended claims 15, 25 and 27 were amended in the same manner as claim 13. Thus amended claims 13, 15, 25 and 27 comply with the requirements of 35 U.S.C. 112, second paragraph. The rejection is respectfully traversed and reconsideration is requested.

Claim 23 has been cancelled without prejudice, thus obviating the rejection.

The Examiner has rejected claim 1, line 11 for insufficient antecedent basis for the limitation "the virtual network device." Claim 1 has been cancelled. Claim 1 is incorporated into amended claim 2. Amended claim 2 no longer recite the step of "setting a virtual network address assigned to the virtual network device to the trunk network address." As a result of the amendment, the network address is being established for the first virtual device in the line

"setting a network address associated with the first virtual device to a first network address, the first network address assigned to a first communications port." Support is found in the original specification, for example, on page 13, lines 23-28; and Fig. 3, reference # 306. The Examiner has also rejected claims 3 and 8 for similar problem found in claim 1. Claims 3 and 8 have been cancelled. Claims 3 and 8 are incorporated into amended claims 4 and 9. Similar amendments were made to amended claims 4 and 9. Thus amended claims 2, 4 and 9 comply with the requirements of 35 U.S.C. 112, second paragraph. The rejection is respectfully traversed and reconsideration is requested.

The Examiner has rejected claim 6, line 2 for insufficient antecedent basis for the limitation "the one of the plurality of communications ports." Applicants have amended claim 6 to provide sufficient antecedent basis. Thus amended claim 6 complies with the requirements of 35 U.S.C. 112, second paragraph. The rejection is respectfully traversed and reconsideration is requested.

The Applicants believe the foregoing amendments overcome the 35 U.S.C. 112, second paragraph rejections and therefore submits that the application is in condition for allowance.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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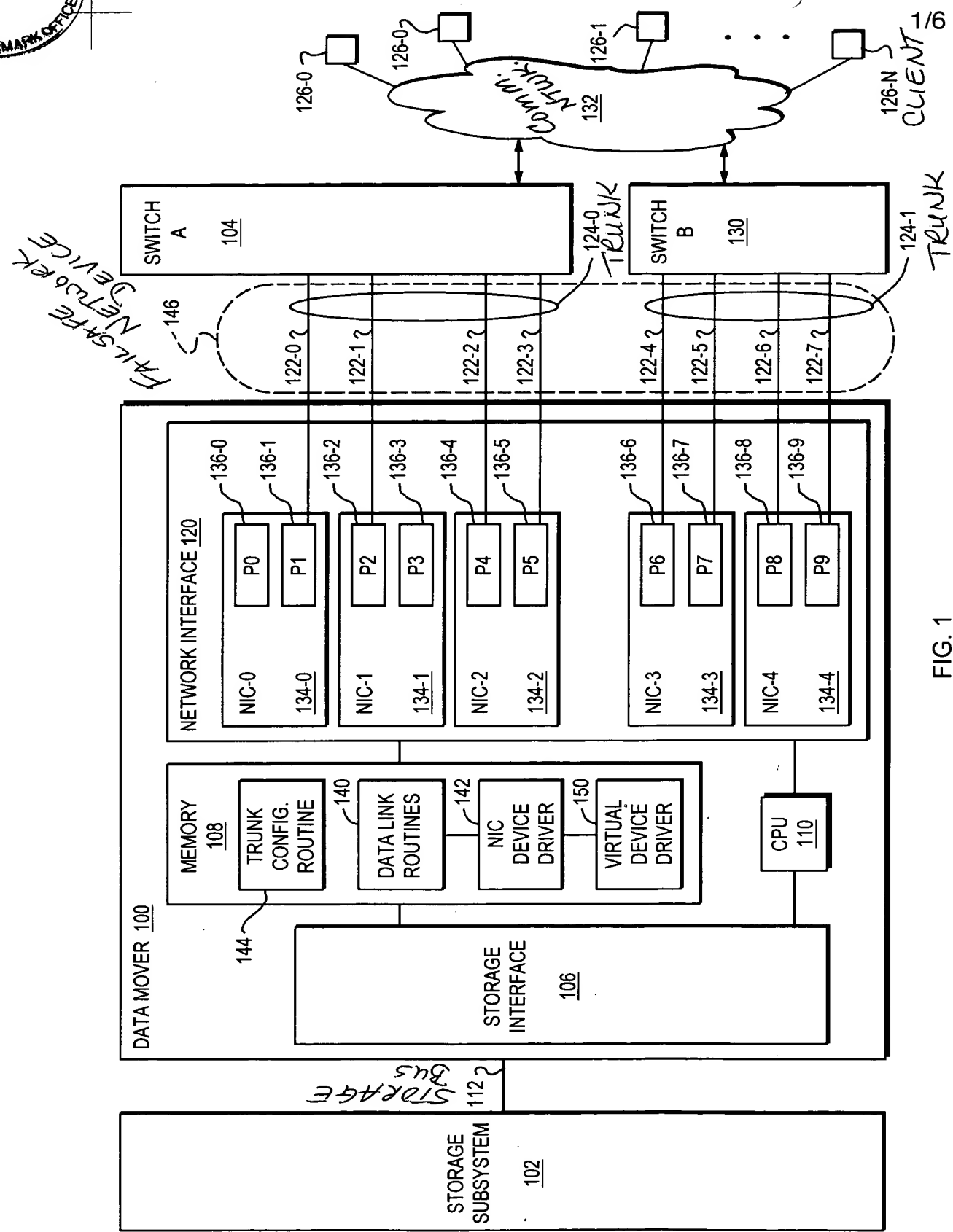
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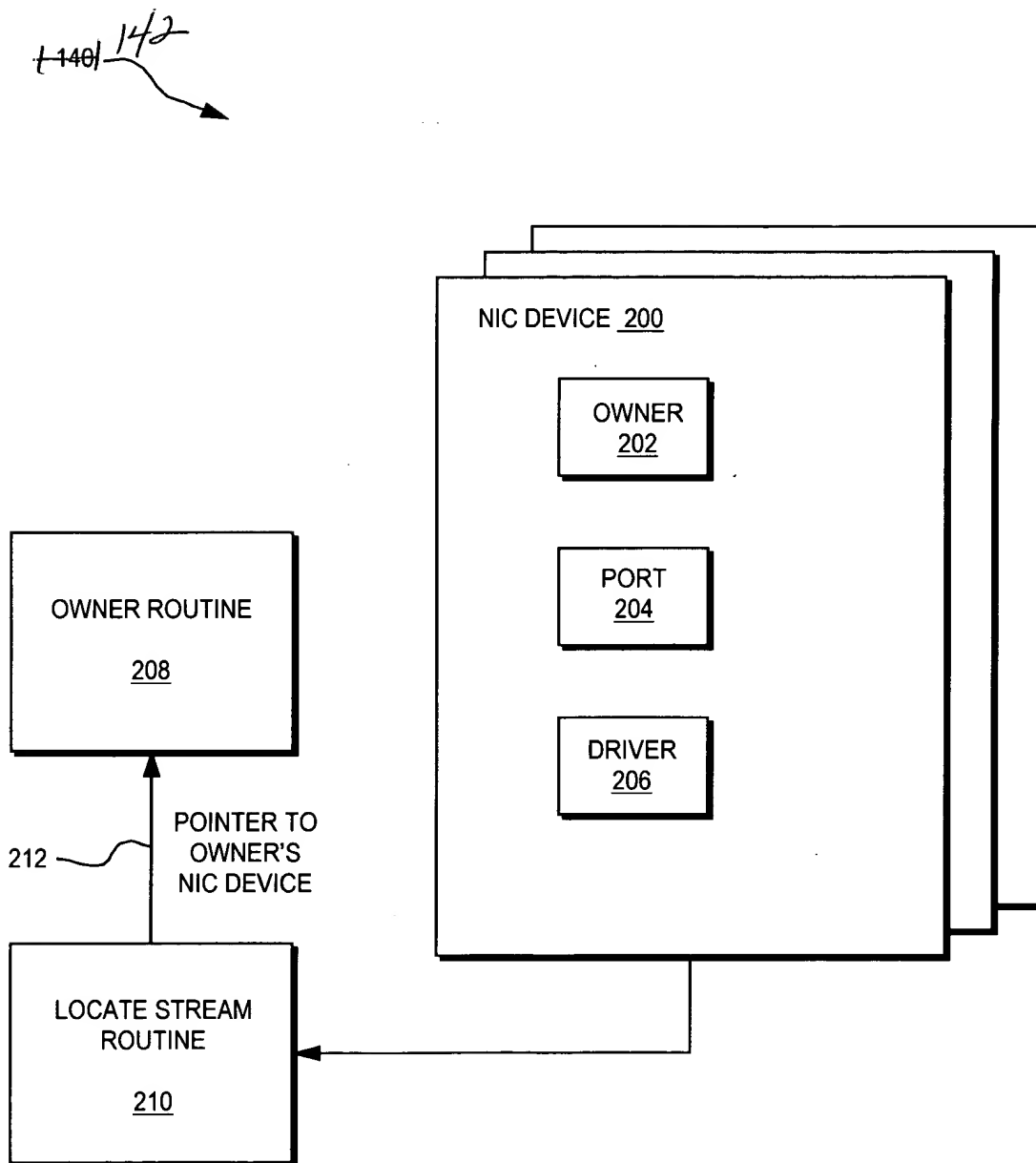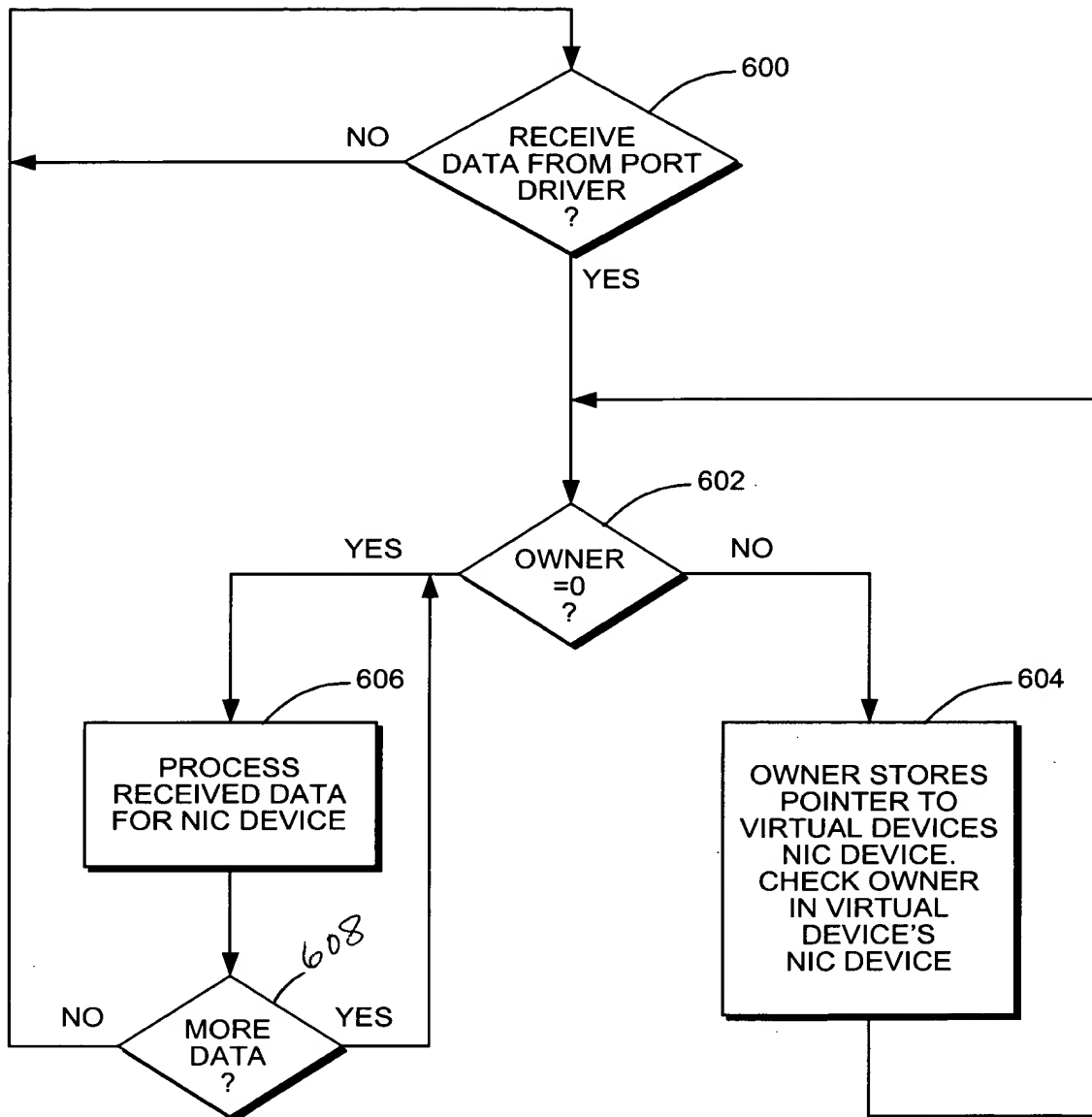Dated: 7/31/06

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FIG. 1

Appl'n No.: 09/872,596
Title: Virtual Network Devices
Inventors: Dennis P.J. Ting, et al.
Annotated Sheet

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[140] 142

NIC DEVICE 200

OWNER
202

PORT
204

DRIVER
206

OWNER ROUTINE

208

POINTER TO
OWNER'S
NIC DEVICE

212

LOCATE STREAM
ROUTINE

210

FIG. 2

Appl'n No.:   09/872,596
Title: Virtual Network Devices
Inventors: Dennis P.J. Ting, et al.
                  Annotated Sheet

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FIG. 6